



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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This safety data sheet (SDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a SDS is not required for this product by the SS586 Specification for Hazard communication for hazardous chemicals and dangerous goods because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

### SECTION 1: Identification

#### 1.1. Product identifier

3M 1400 Series EMS Ball Markers

#### 1.2. Recommended use and restrictions on use

##### Recommended use

To identify and locate the buried networks of telecommunication of gas or electricity water, Flotation solution allows antenna to keep correct orientation in ball. Propylene glycol lowers freezing point.

#### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059  
**Telephone:** +65 6450 8888  
**Website:** www.3m.com.sg

#### 1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

This product is considered to be an article and is exempt from GHS classification

#### 2.2. Label elements

##### SIGNAL WORD

Not applicable.

##### Symbols

Not applicable.

**Pictograms**

Not applicable.

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Water	7732-18-5	50 - 60
Propane-1,2-diol	57-55-6	10 - 20
Electronics	Mixture	10 - 20
Polyethylene	9002-88-4	10 - 20

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation**

No need for first aid is anticipated.

**Skin contact**

No need for first aid is anticipated.

**Eye contact**

No need for first aid is anticipated.

**If swallowed**

No need for first aid is anticipated.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1 Information on toxicological effects

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable.

**SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**Hazardous Decomposition or By-Products**

**Substance**

Aldehydes.  
Carbon monoxide.  
Carbon dioxide.

**Condition**

During combustion.  
During combustion.  
During combustion.

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Not applicable.

### 6.2. Environmental precautions

Not applicable.

### 6.3. Methods and material for containment and cleaning up

Not applicable.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

### 7.2. Conditions for safe storage including any incompatibilities

Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Propane-1,2-diol	57-55-6	AIHA	TWA(as aerosol):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Not applicable.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

Eye protection not required.

##### Skin/hand protection

No chemical protective gloves are required.

##### Respiratory protection

Respiratory protection is not required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Solid. Bila plastic cu solutie la interior.
<b>Specific Physical Form:</b>	Bila plastic cu lichid la interior.
<b>Color</b>	Multicolor
<b>Odor</b>	Odourless
<b>Odour threshold</b>	<i>Not applicable.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>No data available.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	<i>Not applicable.</i>
<b>Flash point</b>	No flash point
<b>Evaporation rate</b>	Nil
<b>Flammability (solid, gas)</b>	Not classified
<b>Flammable Limits(LEL)</b>	None detected
<b>Flammable Limits(UEL)</b>	None detected
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Vapour density</b>	<i>No data available.</i>
<b>Density</b>	<i>No data available.</i>
<b>Relative density</b>	± 1 g/ml [Ref Std: WATER=1]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	<i>Not applicable.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>Not applicable.</i>
<b>Decomposition temperature</b>	<i>Not applicable.</i>
<b>Viscosity</b>	<i>Not applicable.</i>
<b>Average particle size</b>	<i>Not applicable.</i>
<b>Bulk density</b>	<i>Not applicable.</i>
<b>Molecular weight</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	<i>Not applicable.</i>
<b>Percent volatile</b>	<i>Not applicable.</i>
<b>Softening point</b>	<i>No data available.</i>
<b>VOC less H2O &amp; exempt solvents</b>	<i>No data available.</i>
<b>Ash</b>	<i>Not applicable.</i>

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

None known.

**10.5 Incompatible materials**

None known.

**10.6 Hazardous decomposition products**

**Substance**

**Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

**SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1 Information on Toxicological effects**

**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation**

No health effects are expected.

**Skin contact**

No health effects are expected.

**Eye contact**

No health effects are expected.

**Ingestion**

No health effects are expected.

**Additional information:**

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Propane-1,2-diol	Dermal	Rabbit	LD50 20,800 mg/kg
Propane-1,2-diol	Ingestion	Rat	LD50 22,000 mg/kg
Polyethylene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyethylene	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

**3M 1400 Series EMS Ball Markers****Skin Corrosion/Irritation**

Name	Species	Value
Propane-1,2-diol	Rabbit	No significant irritation
Polyethylene	Professional judgement	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Propane-1,2-diol	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
Propane-1,2-diol	Human	Not classified

**Respiratory Sensitisation**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Propane-1,2-diol	In Vitro	Not mutagenic
Propane-1,2-diol	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Propane-1,2-diol	Dermal	Mouse	Not carcinogenic
Propane-1,2-diol	Ingestion	Multiple animal species	Not carcinogenic
Polyethylene	Not specified.	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Propane-1,2-diol	Ingestion	Not classified for female reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
Propane-1,2-diol	Ingestion	Not classified for male reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
Propane-1,2-diol	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,230 mg/kg/day	during organogenesis

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propane-1,2-diol	Ingestion	central nervous system depression	Not classified	Human and	NOAEL Not available	

**3M 1400 Series EMS Ball Markers**

				animal		
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propane-1,2-diol	Ingestion	hematopoietic system	Not classified	Multiple animal species	NOAEL 1,370 mg/kg/day	117 days
Propane-1,2-diol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 5,000 mg/kg/day	104 weeks

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity****Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Propane-1,2-diol	57-55-6	Crustacea other	Experimental	96 hours	LC50	18,800 mg/l
Propane-1,2-diol	57-55-6	Green Algae	Experimental	96 hours	EC50	19,000 mg/l
Propane-1,2-diol	57-55-6	Rainbow trout	Experimental	96 hours	LC50	40,613 mg/l
Propane-1,2-diol	57-55-6	Water flea	Experimental	48 hours	EC50	18,340 mg/l
Propane-1,2-diol	57-55-6	Green algae	Experimental	96 hours	NOEC	15,000 mg/l
Propane-1,2-diol	57-55-6	Water flea	Experimental	7 days	NOEC	13,020 mg/l
Polyethylene	9002-88-4		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

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Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane-1,2-diol	57-55-6	Experimental Biodegradation	28 days	BOD	90 % BOD/ThBOD	OECD 301C - MITI test (I)
Polyethylene	9002-88-4	Data not available-insufficient			N/A	

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane-1,2-diol	57-55-6	Experimental Bioconcentration		Log Kow	-0.92	Other methods
Polyethylene	9002-88-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

**SECTION 14: Transport Information****International Regulations**

**UN No.:** Not restricted for transport.

**UN Proper shipping name:** Not restricted for transport.

**Transportation Class (IMO):** None assigned

**Transportation Class (IATA):** None assigned

**Other Dangerous Goods Descriptions (IMO):** None assigned

**Other Dangerous Goods Descriptions (IATA):** None assigned

**Packing Group:** None assigned

**Marine pollutant:** None assigned

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information.



## **SECTION 16: Other information**

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

**3M Singapore SDSs are available at [www.3m.com.sg](http://www.3m.com.sg)**